

Application Number 09/266,674
Amendment dated October 27, 2004
Responsive to Office Action mailed July 27, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Previously presented): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube;

an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;

an inlet manifold in fluid communication with the tube, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein a pore size of the porous material ranges from greater than $.45\ \mu\text{m}$ to about $5.0\ \mu\text{m}$ and wherein the vent has a surface area ranging from about $.0.8\ \text{cm}^2$ to about $5.0\ \text{cm}^2$;

a drainage bag; and

a stopcock connecting the tube to the drainage bag through the outlet.

Claim 2 (Previously presented): The drip chamber system of claim 1 wherein the pore size of the porous material is about $3\ \mu\text{m}$.

Claim 3 (Previously presented): The drip chamber system of claim 1 wherein the filter is made of expanded polytetrafluoroethylene (e-PTFE).

Claim 4 (Original): The drip chamber system of claim 1 wherein the porous material is a hydrophobic material.

Claim 5 (Canceled).

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Claim 6 (Previously presented): The drip chamber system of claim 1 wherein the filter is flush with the outer surface of the inlet manifold.

Claim 7 (Previously presented): The drip chamber system of claim 6 wherein the vent is integral with an outer surface of the tube.

Claim 8 (Previously presented): The drip chamber system of claim 1 wherein the vent is integral with an outer surface of the tube.

Claim 9 (Previously presented): The drip chamber system of claim 1 wherein the tube of the drip chamber is rigid.

Claim 10 (Previously presented): The drip chamber system of claim 1 wherein the tube is generally cylindrical.

Claim 11 (Previously presented): The drip chamber system of claim 10 wherein the filter is formed in the inlet manifold by creating a hole in the inlet manifold and covering the hole with the porous material.

Claim 12 (Original): The drip chamber system of claim 11 wherein the porous material is a hydrophobic material.

Claim 13 (Previously presented): The drip chamber system of claim 12 wherein the porous material is expanded polytetrafluoroethylene (e-PTFE).

Claims 14 and 15 (Canceled).

Claim 16 (Previously presented): The drip chamber system of claim 13 wherein the pore size of the porous material is about 3 μm .

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Claim 17 (Previously presented): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

- a tube;
- an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;
- an inlet manifold in fluid communication with the fluid reservoir, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein a pore size of the porous material ranges from greater than $.45\text{ }\mu\text{m}$ to about $5.0\text{ }\mu\text{m}$, wherein the porous material is adhered to the inside surface of the inlet manifold;
- a drainage bag; and
- a stopcock connecting the tube to the drainage bag through the outlet.

Claim 18 (Original): The drip chamber system of claim 17 wherein the porous material is adhered to the inside surface of the inlet manifold by a technique chosen from the group consisting of biocompatible adhesive, heat staking, ultrasonic welding or radio frequency (RF) welding.

Claim 19 (Previously presented): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

- a tube;
- an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;
- an inlet manifold in fluid communication with the tube, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein the pore size of the porous material ranges from about $.22\text{ }\mu\text{m}$ to about $5.0\text{ }\mu\text{m}$, and wherein the vent has a surface area ranging from about $.08\text{ cm}^2$ to about 5.0 cm^2 ;
- a drainage bag; and
- a stopcock connecting the drip chamber to a drainage bag through the outlet.

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Claim 20 (Previously presented): The drip chamber system of claim 19 wherein the pore size of the porous material is about 3 μm .

Claim 21 (Previously presented): The drip chamber system of claim 19 wherein the filter is made of expanded polytetrafluoroethylene (e-PTFE).

Claim 22 (Original): The drip chamber system of claim 19 wherein the porous material is a hydrophobic material.

Claim 23 (Canceled).

Claim 24 (Original): The drip chamber system of claim 19 wherein the filter is flush with the outer surfaces of the inlet manifold.

Claim 25 (Previously presented): The drip chamber system of claim 24 wherein the vent is integral with an outer surface of the tube.

Claim 26 (Previously presented): The drip chamber system of claim 19 wherein the vent is integral with an outer surface of the tube.

Claim 27 (Previously presented): The drip chamber system of claim 19 wherein the tube is rigid.

Claim 28 (Previously presented): The drip chamber system of claim 19 wherein the tube of the drip chamber is generally cylindrical.

Claim 29 (Previously presented): The drip chamber system of claim 19 wherein the filter is formed in the inlet manifold by creating a hole in the inlet manifold and covering the hole with the porous material.

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Claim 30 (Original): The drip chamber system of claim 29 wherein the porous materials is a hydrophobic material.

Claim 31 (Previously presented): The drip chamber system of claim 29 wherein the porous material is expanded polytetrafluoroethylene (e-PTFE).

Claim 32 (Canceled).

Claim 33 (Previously presented): The drip chamber system of claim 19 wherein the pore size of the porous material ranges from greater than .45 μm to about 5.0 μm .

Claim 34 (Previously presented): The drip chamber system of claim 33 wherein the pore size of the porous material is about 3 μm .

Claim 35 (Previously presented): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

- a tube;

- an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;

- an inlet manifold in fluid communication with the tube, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein the pore size of the porous material ranges from about .22 μm to about 5.0 μm wherein the porous material is adhered to the inside surface of the inlet manifold;

- a drainage bag; and

- a stopcock connecting the drip chamber to a drainage bag through the outlet.

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Claim 36 (Original): The drip chamber system of claim 35 wherein the porous material is adhered to the inside surface of the inlet manifold by a technique chosen from the group consisting of biocompatible adhesive, heat staking, ultrasonic welding or radio frequency (RF) welding.

37. (Currently amended) A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube;

an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;

an inlet manifold in fluid communication with the ~~tube fluid reservoir~~, the inlet manifold having an inlet and an outer surface, the inlet manifold having a hydrophobic vent, the inlet manifold having an inside surface, the hydrophobic vent having a filter made of a hydrophobic porous material;

a drainage bag; and

a stopcock connecting the tube to the drainage bag through the outlet, wherein the hydrophobic porous material is adhered to the inside surface of the inlet manifold.

38. (Canceled)

39. (Previously presented) The drip chamber system of claim 37, wherein a pore size of the hydrophobic porous material ranges from about .22 μm to about 5.0 μm .

40. (Previously presented) The drip chamber system of claim 39, wherein the pore size of the hydrophobic porous material ranges from about .45 μm to about 5.0 μm .